CLAIMS

What is claimed is:

| 1 | 1. | A method of dynamically identifying a subset of a set of items for which a |
|---|---------|---|
| 2 | plural | ity of selectors have a similar affinity, each of the items having a combination of |
| 3 | attribi | ates the method comprising the steps of |

- quantum presenting for display to each of a group of selectors a subset of a first group of items, each of the first group of items having a particular combination of attributes;
- 7 (b) capturing data indicative of an item preference expressed for a subset of the presented items by at least some of the group of selectors;
- 9 (c) selecting a second group of items responsive to the captured data;
- 10 (d) identifying a subset of the second group of items having similarity among 11 respective attributes.
- 1 2. The method of claim 1 further comprising the step of iterating steps (a) (d) until 2 a stopping condition is met.
- 1 3. The method of claim 1 further comprising the step of identifying a subset of the 2 group of selectors having similarity among expressed item preferences.
- The method of claim 1 wherein step (a) comprises presenting for display every one of a universe of items.
- The method of claim 1 wherein step (b) comprises capturing data indicative of relative item preference expressed for a subset of the presented items by at least some of the group of selectors.
- 1 6. The method of claim 1 wherein step (b) comprises capturing data indicative of a rating assigned to at least some of the presented items by at least some of the group of selectors.

- 1 7. The method of claim 1 further comprising the step of normalizing the captured
- 2 data from each selector.
- 1 8. The method of claim 1 wherein step (c) comprises selecting a second group of
- 2 items responsive to the captured data using an evolutionary algorithm.
- 1 9. The methods of claim 1 wherein step (a) comprises presenting for display to a
- 2 group of selectors a first group of items, each item having a set of merit attributes and a
- 3 set of reproduction attributes.
- 1 10. The method of claim 1 further comprising the step of determining, for each of the
- 2 first group of items, a fitness score responsive to the captured data for that item and the
- 3 reproduction attributes of that item.
- 1 11. The method of claim 10 further comprising the step of creating a normalized
- 2 fitness score vector including the fitness score of a plurality of the first group of items.
- 1 12. The method of claim 10 further comprising the step of selecting one of the first
- 2 group of items as reproduction parents using a fitness-proportionate algorithm.
- 1 13. The method of claim 12 wherein the reproduction parents are selected using a
- 2 roulette wheel algorithm.
- 1 14. The method of claim 12 wherein the reproduction parents are selected using a
- 2 Stochastic Universal Sampling algorithm.
- 1 15. The method of claim 12 further comprising the step of selecting a mate for each
- 2 reproduction parent responsive to the reproduction attributes of the mate and the
- 3 reproduction parent.

- 1 16. The method of claim 15 wherein step (c) comprises selecting new items by
- 2 applying a recombination operator to the merit attributes of a respective mate-
- 3 reproduction parent pair.
- 1 17. The method of claim 16 wherein the recombination operator is a crossover
- 2 operator.
- 1 18. The method of claim 16 further comprising the step of determining, for each one
- of the second group of items, a plurality of reproduction similarity factors, each of the
- 3 plurality of reproduction similarity factors representing the similarity between the
- 4 reproduction attributes of the one item and each other of the second group of items.
- 1 19. The method of claim 18 wherein step (d) comprises identifying a subset of the
- 2 second group of items, each one of the items having, with respect to each other item of
- 3 the subset, a reproduction similarity factor less than a predetermined threshold.
- 1 20. A method of determining the relative affinity of each of a group of consumers for
- a product form, comprising a product or portion thereof, having a combination of
- attributes, the method comprising the steps of:
- a) presenting to at least some of a group of consumers a group of product forms,
- 5 each of which has a particular combination of attributes,
- b) enabling the at least some of the group of consumers to express a preference for a
- 7 subset of the presented product forms,
- 8 c) capturing data indicative of the preferences expressed by the at least some of the
- 9 group of consumers,
- d) inputting the data into a computer program for generating a derived group of
- product forms including forms having a new attribute or new combination of
- attributes, the generation of which is influenced by the captured data,

- e) presenting to the at least some of the group of consumers said derived group of product forms, and
- 15 f) repeating steps b) through e) to collect data indicative of the relative affinity of the consumer or group of consumers for a product form.
- 1 21. The method of claim 20 wherein the captured data is conditioned or the computer
- 2 program is conditioned so as to generate a variety of derived product forms which
- 3 promotes exploration of consumer preferences for alternative combinations of product
- 4 attributes.
- 1 22. The method of claim 20 wherein the captured data is conditioned or the computer
- 2 program is configured so as to generate derived product forms which converge on a set of
- 3 product attributes matching the preference of one or a subset of consumers.
- 1 23. The method of claim 20 wherein the captured data is conditioned or the computer
- 2 program is configured so as to generate derived product forms which converge on a
- 3 plurality of sets of product attributes matching the preference of a corresponding plurality
- 4 of subsets of consumers.
- 1 24. The method of claim 20 wherein the computer program exploits a genetic or
- 2 evolutionary computation technique to generate a derived group of product forms.
- 1 25. The method of claim 20 wherein the computer program exploits conjoint analysis
- 2 weighing of attributes of product forms derived from the expressed preferences of the at
- 3 least one of the group of consumers.
- 1 26. A method of determining which of a large number of forms of a product, each of
- which comprises a plurality of alternative attributes, is preferred by a selector, the method
- 3 comprising the steps of:
- a) presenting to the selector a set of product forms, each of which has a particular
- 5 combination of attributes;

- b) enabling the selector to express a preference for a subset of the presented product
- 7 forms;
- 8 c) capturing data indicative of the preferences expressed by the selector;
- 9 d) inputting the data into a computer program for generating a derived set of product
- 10 forms including forms having a new attribute or new combination of attributes, the
- generation of which is influenced by the captured data;
- e) presenting to the selector at least a portion of said derived group of product forms;
- 13 and
- 14 f) repeating steps b) through e) until a stopping criterion is met.
- 1 27. The method of claim 26 wherein the selector comprises a single person, a group of
- 2 persons, a proxy for a person such as a machine learning system, neural net, statistical
- 3 model, or expert system, or a combination thereof.
- 1 28. The method of claim 26 comprising the additional step of effecting a sale to the
- 2 selector or a subset thereof of a product based on a selected product form.
- 1 29. The method of claim 26 wherein a product based on the selected product form is
- 2 produced for delivery to the selector or a subset thereof after the stopping criterion is met.
- 1 30. The method of claim 26 wherein the product based on the selected product form is
- 2 in existence before the stopping criterion is met.
- 1 31. The method of claim 26 wherein the selector comprises a plurality of persons, the
- 2 method comprising the additional step of presenting to a selector or a subset thereof data
- 3 indicative of the preferences of the plurality of persons or a subgroup thereof.
- 1 32. The method of claim 26 comprising the additional step of producing a plurality of
- 2 units of a selected product form.
- 1 33. The method of claim 26 wherein a group of product forms is presented to the
- 2 selector via an electronic network.

- 1 34. The method of claim 26 comprising an additional step, prior to step a, of
- 2 identifying attributes of the product or their range, determining a code to represent the
- attributes or ranges of attributes, or determining the relationship of the code to attribute
- 4 presentation.
- 1 35. The method of claim 26 wherein the selector is a group of persons and wherein a
- 2 derived group of product forms presented to a person in said group is generated using
- data indicative of the preferences expressed by one or more other persons in said group.
- 1 36. The method of claim 26 wherein the program generates a said derived group of
- 2 product forms using a genetic algorithm operation, genetic programming, conjoint
- analysis, generative grammars, a generator of random attributes, a genetic computation
- 4 technique, an evolutionary computation technique or a combination thereof.
- 1 37. The method of claim 26 wherein the program selects from a set of product
- 2 attributes to generate at least a portion of said derived set of product forms.
- 1 38. The method of claim 26 wherein the program exploits a function which creates or
- 2 modifies an attribute to generate said derived set of product forms or a member thereof.
- 1 39. The method of claim 26 comprising the additional step, prior to step e), of
- 2 deleting a generated product form from or reintroducing a previously introduced product
- 3 form to a said derived group of product forms.
- 1 40. The method of claim 26 comprising the additional step of constraining generation
- of a derived group of product forms to those comprising a preselected attribute.
- 1 41. The method of claim 26 comprising the additional step of permitting a selector or
- 2 a subset thereof to constrain generation of a derived group of product forms to those
- 3 comprising an attribute chosen by a selector.

- 1 42. The method of claim 26 wherein data obtained from a subset of the persons
- 2 comprising the selector is provided with a disproportionate influence on the generation of
- 3 said derived group of product forms.
- 1 43. The method of claim 26 comprising the step using at least a portion of attribute
- 2 preference information or demographic information associated with the selector to
- 3 constrain the generation of derived product forms.
- 1 44. The method of claim 43 wherein the obtained attribute preference information is
- 2 the range of prices the buyer is willing to pay for the product, selector body size
- 3 information, product style information, color preference, material preference, a
- 4 performance specification, or a list of selector desired product functions.
- 1 45. The method of claim 26 wherein a product attributes is aesthetic.
- 1 46. The method of claim 26 wherein a product attribute is functional.
- 1 47. The method of claim 26 wherein a product attributes is sensed by the selector,
- 2 visually, aurally, tactilely, orally, or nasally.
- 1 48. The method of claim 26 wherein the product is a good, service, menu, or plan.
- 1 49. The method of claim 26 comprising the additional step of permitting the selector
- 2 to specify that an attribute of said product will be favored in said computer program so as
- 3 to enrich said derived product forms with said favored attributes.
- 1 50. The method of claim 26 wherein the stopping criterion is:
- 2 g) a purchase decision made by the selector or a subset thereof;
- 3 h) the cycling of a predetermined number of iterations of steps b e;
- 4 i) the reaching of a consensus agreement on attributes by a plurality of
- 5 persons comprising the selector;

| 6 | j) | the reaching of a predetermined number of individual assessments by | | | |
|----|--|--|--|--|--|
| 7 | persons comprising the selector; | | | | |
| 8 | k) | the passage of a predetermined duration of the method; | | | |
| 9 | 1) | the intervention of a supervisor; | | | |
| 10 | m) | the arrival of a predetermined point in time; | | | |
| 11 | n) | the lack of improvement in emerging product forms as judged by a person | | | |
| 12 | comprising the selector; | | | | |
| 13 | o) | the lack of improvement in emerging product forms as judged by a | | | |
| 14 | supervisor; | | | | |
| 15 | p) | the lack of improvement in emerging product forms as judged by a | | | |
| 16 | computer program or subroutine that uses as its input data indicative of the preferences | | | | |
| 17 | expressed by the selector; | | | | |
| 18 | q) | the identification of distinct preferences among subsets of the selector for | | | |
| 19 | different attributes or combinations of attributes; | | | | |
| 20 | r) | the selection of a specific product form by a person comprising the | | | |
| 21 | selector; or | | | | |
| 22 | s) | lack of dissimilarity among the emergent product forms; or | | | |
| 23 | t) | a combination thereof. | | | |
| 1 | 51. The method of claim 26 comprising repeating steps b)- e) a sufficient number of | | | | |
| 2 | times to permit determination of one or a plurality of product forms preferred by one or a | | | | |
| 3 | corresponding plurality of persons. | | | | |
| 1 | 52. The 1 | method of claim 26 comprising the additional steps of collecting data about | | | |
| 2 | the selector or a subset thereof and correlating the product forms preferred by the selector | | | | |
| 3 | or a subset thereof to the data. | | | | |

- 1 53. The method of claim 52 wherein the data about the selector or a subset thereof is
- 2 data indicative of the selector's state of mind or is demographic data.

- 1 54. The method of claim 26 wherein the data expressed by the selector or a subset
- thereof is nominal data, indicative of a classification by the selector of the presented
- 3 product forms into predefined categories, ordinal data indicative of a rank ordering of
- 4 preference among presented product forms, a preference for one or a subset of product
- forms, cardinal data comprising a grading given to a product form, utilitarian voting data,
- an alteration of an attribute of a product form made by a selector or a subset thereof, an
- 7 indication of the confidence of the selector, or a subset thereof, in his preference for a
- 8 given product form, or a combination thereof.
- 1 55. The method of claim 26 wherein, after step c, the data is conditioned by a
- 2 supervisor or the computer program is configured so as to promote convergence to a
- 3 product form desired by a supervisor.
- 1 56. The method of claim 26 wherein the data is conditioned or the computer program
- 2 is configured so as to lessen the number of cycles required to reach a stopping criterion
- 3 thereby to accelerate the process.
- 1 57. The method of claim 26 wherein the computer program comprises a plurality of
- 2 programs running in parallel or in series.
- 1 58. The method of claim 26 comprising the additional step, prior to step d, of
- 2 aggregating data from a plurality of persons comprising the selector to obtain data
- 3 indicative of aggregate ranking.
- 1 59. The method of claim 26 wherein the selector comprises a person, the process
- 2 comprising the additional step of presenting to the person data indicative of at least a
- 3 portion of the history of his choices or the choices of others engaged as selectors.
- 1 60. The method of determining a preference of a group comprising the steps of:
- 2 u) presenting electronically one or a series of preference alternatives for
- 3 selection by individual members of a group of persons;

| 4 | v) after members of a first group of persons comprising a multiplicity of said | | | |
|----|---|--|--|--|
| 5 | individual members has electronically responded to a set of offered alternatives, digesting | | | |
| 6 | the selections of said members to determine a preference trend of said first group; | | | |
| 7 | w) presenting electronically a different one or series of multiple choice | | | |
| 8 | preference alternatives altered to accommodate said determined preference trend for | | | |
| 9 | selection by individual members; and | | | |
| 10 | x) after a second group comprising a multiplicity of individual members has | | | |
| 11 | electronically responded to the altered alternatives, digesting the selections of said second | | | |
| 12 | members to determine a refined preference trend. | | | |
| 13 | | | | |
| 1 | 61. Apparatus for determining which of a large number of forms of a product, each of | | | |
| 2 | which has a plurality of alternative attributes, is preferred by a selector comprising one or | | | |
| 3 | more persons, the apparatus comprising: | | | |
| 4 | a terminal for presenting to a selector a group of product forms, each of which ha | | | |
| 5 | a particular combination of attributes; | | | |
| 6 | an input to the terminal enabling the selector to log data indicative of its | | | |
| 7 | preference for a subset of the presented product forms it prefers; | | | |
| 8 | a data link from the terminal to a central computer; | | | |
| 9 | a program, executable by the computer, for generating plural generations of | | | |
| 10 | derived groups of product forms, the generation of which is influenced by the data | | | |
| 11 | received through the link from the selector; and | | | |
| 12 | for presenting through the data link to a selector a said derived group of product | | | |
| 13 | forms; | | | |
| 14 | said derived groups of product forms including forms having a new attribute or a | | | |
| 15 | new combination of attributes. | | | |
| 1 | 62. The apparatus of claim 61 comprising a network wherein the program resides in a | | | |
| 2 | server which is linked through to plural terminals. | | | |

- 1 63. The apparatus of claim 62 wherein the network is an internet, an intranet, or an
- 2 extranet.
- 1 64. The apparatus of claim 61 wherein the terminal comprises a computer, a
- 2 television, a telephone, or a personal digital assistant
- 1 65. The apparatus of claim 61 wherein the selector is a group of persons, the
- 2 apparatus comprises a plurality of terminals, and wherein a derived group of product
- forms presented to a person in said group is generated using data indicative of the
- 4 preferences expressed by one or more other persons in said group.
- 1 66. The apparatus of claim 61 wherein the program executes a genetic algorithm
- 2 operation, a genetic programming operation, a conjoint analysis operation, a generative
- 3 grammar operation, a generator of random attributes, or an evolutionary strategy
- 4 operation to generate a said derived group of product forms.
- 1 67. The apparatus of claim 61 wherein the program selects from a set of product
- 2 attributes to assemble a said derived set of product forms.
- 1 68. The apparatus of claim 61 wherein the program exploits a function which can be
- 2 varied to modify an attribute to generate a said derived set of product forms.
- 1 69. The apparatus of claim 61 wherein said input includes means for permitting a
- 2 selector to delete a generated product form or to introduce a new product form between a
- 3 generation of a said derived group of product forms.
- 1 70. The apparatus of claim 61 wherein said input or said program includes means for
- 2 permitting the imposition of a constraint on the generation of a derived group of product
- 3 forms to those comprising a preselected attribute.

- 1 71. The apparatus of claim 61 wherein said input permits a selector to constrain
- 2 generation of a derived group of product forms to those comprising an attribute preferred
- 3 by the selector.
- 1 72. The apparatus of claim 61 wherein said input includes means for obtaining
- 2 preference information from the selector and said program uses at least a portion of said
- 3 preference information to constrain the generation of derived product forms.
- 1 73. The apparatus of claim 61 wherein the terminal comprises means for presenting
- 2 product attributes to the selector at said terminal visually, aurally, tactilely, or nasally.
- 1 74. The apparatus of claim 61 wherein the terminal comprises means for permitting
- 2 the selector to specify an attribute of said product.
- 1 75. The apparatus of claim 61 further comprising means for storing a plurality of
- 2 product forms preferred by the selector.
- 1 76. The apparatus of claim 61 further comprising electronic means for effecting a sale
- 2 of a product form selected to a selector.
- 1 77. Software operable on a computer system for determining which of a large number
- of forms of a product, each of which has a plurality of alternative attributes, is preferred
- 3 by a selector comprising one or more persons, the apparatus comprising:
- 4 code for presenting on a terminal to a selector a group of product forms, each of
- 5 which has a particular combination of attributes;
- 6 code for enabling the selector to log data on the terminal indicative of its
- 7 preference for a subset of the presented product forms;
- 8 code for transmitting data from the terminal to a central computer;
- a program, executable by the computer, for generating plural generations of
- derived groups of product forms, the generation of which is influenced by the data
- received from the selector; and

| 12 | for presenting to a selector at a terminal a sa | aid derived group of product forms; | | | |
|----|--|--|--|--|--|
| 13 | said derived groups of product forms including forms having a new attribute or a | | | | |
| 14 | new combination of attributes. | | | | |
| 1 | 1 78. The method of claim 26 wherein the data in | dicative of preferences comprises data | | | |
| 2 | indicative of preference as between a presented product form and a pre-existing product, a | | | | |
| 3 | product preferred by consumers, or a product popular with consumers. | | | | |
| 1 | 1 79. The method of claim 26 wherein the data in | dicative of preferences includes data | | | |
| 2 | 2 indicative of the confidence of a selector in his pref | indicative of the confidence of a selector in his preference expression. | | | |
| 3 | 3 | | | | |
| 1 | 1 80. The method of claim 79 comprising the add | litional step of using the data indicative | | | |
| 2 | of the confidence of a selector in the regulation of a strategy of generation of derived | | | | |
| 3 | product forms or a pace of convergence to a preferred product form. | | | | |
| 4 | 4 | | | | |
| 1 | 1 81. An automated method for identifying memb | per candidates for a group of persons | | | |
| 2 | 2 having a shared affinity, the method comprising the | having a shared affinity, the method comprising the steps of: | | | |
| 3 | a) presenting to a group of participants | a set of alternatives, each of which | | | |
| 4 | 4 has a particular combination of attributes; | | | | |
| 5 | b) enabling the participants or a subset | thereof to express a preference for a | | | |
| 6 | 6 subset of the presented alternatives; | subset of the presented alternatives; | | | |
| 7 | c) capturing data indicative of the prefe | erences expressed by the participants | | | |
| 8 | 8 or a subset thereof; | or a subset thereof; | | | |
| 9 | d) inputting the data into a computer pa | rogram for generating a derived set of | | | |
| 10 | alternatives including alternatives having a new attribute or new combination of | | | | |
| 11 | attributes, the generation of which is influenced by the captured data; | | | | |
| 12 | e) presenting to participants at least a p | portion of said derived group of | | | |
| 13 | attributes; and | | | | |
| 14 | 4 f) repeating steps b) through e) until a | group of persons having a shared | | | |

affinity for an alternative or a set of alternatives is identified.

- 1 82. The method of claim 26 wherein the set of products generated in step d) also
- 2 includes at least one product form specified by a human.
- 1 83. A method of designing a product having a potentially large number of forms
- 2 comprising alternative attributes, the method comprising the steps of:
- a) presenting electronically to each of a plurality of persons a group of
- 4 product forms, each of which has a particular combination of attributes;
- b) enabling said persons to express a preference for a subset of the presented
- 6 product forms;
- c) capturing data indicative of the preferences expressed by said persons;
- 8 d) inputting the data into a computer program for generating a derived group
- of product forms including forms having a new attribute or new combination of
- attributes, the generation of which is influenced by the captured data;
- e) presenting to a plurality of persons said derived group of product forms;
- f) repeating steps b) through e) until a stopping criterion is met.
- 1 84. The method of claim 83 comprising the additional step of producing a plurality of
- 2 units of a product based on a selected product form.
- 1 85. The method of claim 83 comprising the additional step of effecting a sale to one
- 2 or more of said persons of a product based on a selected product form.
- 1 86. The method of claim 83 wherein a derived group of product forms presented to a
- 2 person is generated using data indicative of the preferences expressed by one or more
- 3 other persons.
- 1 87. The method of claim 83 wherein the product attributes are sensed by the persons
- 2 visually, aurally, tactilely, or nasally.
- 1 88. The method of claim 83 comprising repeating steps b)- e) a sufficient number of
- times to permit determination of one or a plurality of product forms preferred by said
- 3 persons.

- 1 89. The method of claim 88 comprising the additional step of obtaining data
- 2 indicative of the person's state of mind or demographic data from said persons and
- 3 correlating a product form preference with said data.
- 1 90. The method of claim 83 wherein at least one said person is a professional
- 2 designer.
- 1 91. A method for computerized, automated maximization of affinity between the
- 2 preferences of a group of persons and the design of a service, good, or plan, the method
- 3 comprising:
- 4 iterating cycles of generation and evaluation of service, good, or plan alternatives
- 5 until a stop criterion is met, wherein
- the generation and evaluation in each cycle produces an altered set of good,
- 7 service, or plan alternatives; and
- 8 each generation step, save the first, uses as its input an output of the evaluation
- 9 step, and
- each evaluation step uses as its input an output of the generation step.
- 1 92. The method of claim 91 wherein the stop criterion is convergence of a given
- 2 individual or group of services, goods or plans with the preference of a group of persons.
- 1 93. The method of claim 91 wherein the evaluation step of a cycle is done by a
- 2 plurality of persons, an expert system, or a neural net, thereby to accelerate the time when
- 3 the stop criterion is met.
- 1 94. The method of claim 91 wherein the generation step is done by a computer
- 2 program for generating good, service, or plan alternatives using a genetic or evolutionary
- 3 computational technique.
- 1 95. The method of claim 91 wherein the evaluation step of a cycle is conducted by a
- 2 neural net trained to simulate a particular person's preference.

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- 1 96. The method of claim 91 wherein the evaluation step of a cycle is conducted by a
- 2 plurality of separate evaluation programs.
- 1 97. The method of claim 91 comprising a multiplicity of cycles wherein a person
- 2 conducts the evaluations in at least a portion of the cycles the method further comprising
- 3 storing data indicative of the alternatives and evaluations in the cycles and using the data
- 4 to train a neural net comprising an evaluation engine.
- 1 98. An automated method for computer-aided evolutionary design of products
- 2 wherein the affinity between a selector and the design object is increased through
- 3 repeated cycles of computer program-driven generation of alternative designs and selector
- 4 driven evaluation of said alternatives until a stop criterion is reached.
- 1 99. A method of reaching consensus on a plan comprising a potentially large number
- 2 of alternative attributes, the method comprising the steps of:
- a) presenting electronically to each of a plurality of participating persons a
- 4 group of plan alternatives, each of which has a particular combination of attributes;
 - b) enabling said persons to express a preference for a subset of the presented
- 6 plan alternatives;
- 7 c) capturing data indicative of the preferences expressed by said persons;
- 8 d) inputting the data into a computer program for generating a derived group
- 9 of plan alternatives including plans having a new attribute or new combination of
- attributes, the generation of which is influenced by the captured data;
- e) presenting to a plurality of participating persons said derived group of plan
- 12 alternatives:
- 13 f) repeating steps b) through e) until a consensus is achieved.
- 1 100. The method of claim 99 comprising presenting on a network comprising an
- 2 internet, an intranet, or an extranet.

- 1 101. The method of claim 99 comprising the additional step of generating plan
- 2 alternatives that are preferred by a supervisor and presenting them to the persons so as to
- 3 induce the persons to choose attributes of a supervisor-preferred plan.
- 1 102. The method of claim 99 comprising the additional step of constraining generation
- 2 of a derived group of plan alternatives to those comprising a preselected attribute.
- 1 103. A method for promoting selection of a product from among a large number of
- 2 similar product forms comprising alternative attributes, the method comprising the steps
- 3 of:

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- a) presenting electronically to a shopper a group of product forms, each of which has a particular combination of attributes;
 - b) enabling the shopper to express a preference for a subset of the presented product forms;
 - c) capturing data indicative of the preferences expressed by the shopper;
- 9 d) inputting the data into a computer program for generating a derived group 10 of product forms including forms having a new attribute or new combination of attributes, 11 the generation of which is influenced by the captured data;
- e) presenting to the shopper said derived group of product forms; and
- 13 f) repeating steps b) through e) until a stopping criterion is met.
- 1 104. The method of claim 103 wherein the stopping criterion is selection of a specific
- 2 preferred product form for purchase by the shopper.
- 1 105. The method of claim 103 wherein the shopper selects a specific product form, the
- 2 method comprising the additional steps of having said specific product form assembled
- 3 after the stopping criterion is met and selling the product to the shopper.
- 1 106. The method of claim 103 wherein the program selects from preexisting product
- 2 forms to generate said derived group of product forms and the shopper selects a said

- 3 preexisting product form, the method comprising the additional step of selling the said
- 4 preexisting product form to the shopper.
- 1 107. The method of claim 103 wherein the presentation of product forms is made via
- 2 an electronic network comprising an internet, an intranet, or an extranet.
- 1 108. The method of claim 103 wherein the program generates a said derived group of
- 2 product forms using a genetic algorithm operation, genetic programming, conjoint
- analysis, generative grammars, a generator of random attributes, a genetic computation
- 4 technique, an evolutionary computation technique or a combination thereof.
- 1 109. The method of claim 103 comprising the additional step of permitting said
- 2 shopper to constrain generation of a derived group of product forms to those comprising
- 3 an attribute preferred by the shopper.
- 1 110. The method of claim 103 comprising the additional steps of obtaining attribute
- 2 preference information from the shopper prior to step b) and using at least a portion of
- 3 said attribute preference information to constrain the generation of derived product forms.
- 1 111. The method of claim 103 comprising the additional step of obtaining attribute
- 2 preference information from the shopper, wherein the attribute preference information is
- 3 the range of prices the shopper is willing to pay for the product, shopper body size
- 4 information, product style information, color preference, material preference, a
- 5 performance specification, or a list of shopper-desired product functions.
- 1 112. The method of claim 103 wherein the computer program for generating a derived
- 2 group of product forms is programmed to generate product forms available for sale so as
- 3 to shape the selectors preference toward and to promote sale of said available product
- 4 forms.
- 1 113. The method of claim 103 wherein the product is a good or a service.

- 1 114. The method of claim 111 comprising the additional step of:
- 2 presenting electronically different sets of one or a series of preference alternatives
- 3 altered to accommodate the refined preference trend; and
- 4 after a third group comprising a multiplicity of individual members has
- 5 electronically responded to the altered alternatives, digesting the selections of said third
- 6 members to determine a more refined preference trend.
- 1 115. The method of claim 111 wherein the steps of digesting selections to determine a
- 2 preference trend is done by a computer program for generating a derived group of
- 3 preference alternatives using a genetic or evolutionary computation algorithm.
- 1 116. The method of claim 111 wherein the alternatives are presented over the internet,
- 2 an intranet or an extranet.
- 1 117. An automated method for identifying member candidates for a group of persons
- 2 having a shared affinity, the method comprising the steps of:
- a) presenting to a group of participants a set of alternatives, each of which has a
- 4 particular combination of attributes;
- b) enabling the participants or a subset thereof to express a preference for a subset of
- 6 the presented alternatives;
- c) capturing data indicative of the preferences expressed by the participants or a
- 8 subset thereof;
- 9 d) inputting data into a computer program for generating a derived set of alternatives
- including alternatives having a new attribute or new combination of attributes, the
- generation of which is influenced by the captured data;
- e) presenting to participants at least a portion of said derived group attributes; and
- f) repeating steps b) through e) until a group of persons having a shared affinity for
- an alternative or a set of alternatives is identified.